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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,963	05/01/2001	Serguei A. Glazko	010091	4936

23696 7590 12/19/2003

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EXAMINER
SMITH, SHEILA B

ART UNIT	PAPER NUMBER
2681	6

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

Office Action Summary	Application No.	Applicant(s)	
	09/846,963	GLAZKO ET AL.	
	Examiner	Art Unit	
	Sheila B. Smith	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-29 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-29 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over XP-002198525.

Regarding claim 1, XP-002198525 discloses essentially all the claimed invention as set fourth in the instant application, further XP-002198525 discloses a method of acquiring a gated pilot signal in an expanded PN space split into a plurality of N non-overlapping groups of specific pilot offsets (which reads on XP-002198525 page 6-48 lines 1-4), wherein the N groups are defined, a search of only a first of the N groups is necessary for acquisition of the gated pilot signal, while when a search of N or fewer groups is necessary for acquisition of the gated pilot signal (which reads on XP-002198525 page 6-66 lines 14-20), the method comprising: searching the first group to identify the gated pilot signal; searching at least the first group to identify the gated pilot signal, but fewer than N groups; and identifying the gated pilot signal from the searched groups (which reads on XP-002198525 page 6-48 lines 1-4). XP-002198525 discloses the claimed invention except for the particular function as expressed in claim 1.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide for a pilot offsets wherein the N groups is necessary for the acquisition of the gated pilot signal a function expressed as PN_INC < max, and PN_INC =

max, since the general conditions of aquiring the gated pilot signal is disclosed in the prior art, and discovering an optimum or workable function of effective variables involves only routine skill in the art.

Regarding claims 2,5,6,10, 11, 24, XP-002198525 discloses everything claimed, as applied above (see claim 1) XP-002198525 discloses the claimed invention except for N is four and max is four, and expanded PN space is an integer multiple of 32,768 chips, where the integer multiple is greater than one. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide for for N is four and max is four, and expanded PN space is an integer multiple of 32,768 chips, where the integer multiple is greater than one, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. ***In re Aller***, 105 USPQ 233.

Regarding claim 3, XP-002198525 discloses everything claimed, as applied above (see claim 1) XP-002198525 discloses the searched groups are searched in parallel (which reads on XP-002198525 page 6-44 lines 22-26).

Regarding claim 4, XP-002198525 discloses everything claimed, as applied above (see claim 1) XP-002198525 discloses the searched groups are searched sequentially (which reads on XP-002198525 page 6-44 lines 22-26).

Regarding claim 7, XP-002198525 discloses everything claimed, as applied above (see claim 1) XP-002198525 discloses the gated pilot signal is not identified after searching at least the first group, searching a last- group of the N groups (which reads on XP-002198525 page 6-46 lines 7-12).

Regarding claim 8, XP-002198525 discloses everything claimed, as applied above (see claim 1) XP-002198525 discloses a gated pilot reference in a wireless communication system, comprising: partitioning an overall code space in which the pilot reference may be found into a plurality of groups of codes (which reads on XP-002198525 page 6-43 lines 25-28); ordering the plurality of groups based on likelihood of detecting the pilot reference in each of the groups (which reads on XP-002198525 page 6-43 lines 13-15); searching for the pilot reference in accordance with the ordered groups; and terminating the searching upon acquisition of the pilot reference (which reads on XP-002198525 page 6-42 lines 18-24).

Regarding claim 9, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses each code corresponds to a particular chip offset of a pseudo-noise (PN) sequence used to generate the pilot reference (which reads on XP-002198525 page 6-66 lines 14-20)

Regarding claim 12, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses the plurality of groups include a first group of code sets most likely to be used to generate the pilot reference and a last group of code sets least likely to be used to generate the pilot reference (which reads on XP-002198525 page 6-43 lines 9-12).

Regarding claim 13,15, 27, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses the searching for the pilot reference is performed for each group and includes detecting for the pilot reference in a set of samples based on the codes in the group to provide one or more candidate peaks, and processing each candidate peak to determine acquisition of the pilot reference (which reads on XP-002198525 page 6-67 lines 17-19).

Regarding claim 14, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses the searching for the pilot reference further includes pipelining the detecting and processing for different groups to shorten pilot acquisition time (which reads on XP-002198525 page 6-45 lines 17-22).

Regarding claim 16, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses the detecting and dwelling are performed on different sets of samples (which reads on XP-002198525 page 6-46 lines 7-12).

Regarding claim 17, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses the detecting and dwelling are performed using different sets of parameter values (which reads on XP-002198525 page 6-46 lines 7-12).

Regarding claim 18, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses each group is partitioned into a plurality of segments, and wherein the detecting is performed on each of the plurality of segments and one or more detected peaks are provided for each segment (which reads on XP-002198525 page 6-48 lines 9-12).

Regarding claim 19, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses the searching is performed using a plurality of stages, wherein each stage is associated with a respective set of parameter values used for the searching (which reads on XP-002198525 page 6-43 lines 24-28).

Regarding claim 20, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses the searching is performed for the plurality of groups for one stage at a time (which reads on XP-002198525 page 6-46 lines 7-12).

Regarding claim 21, XP-002198525 discloses everything claimed, as applied above (see claim 19) XP-002198525 discloses the searching is performed for a first set of one or more groups for the plurality of stages followed by a second set of one or more groups for the plurality of stages (which reads on XP-002198525 page 6-45 lines 27-35).

Regarding claim 22, XP-002198525 discloses everything claimed, as applied above (see claim 19) XP-002198525 discloses the searching is performed using two stages (which reads on XP-002198525 page 6-45 lines 29-30).

Regarding claim 23, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses the communication system is a CDMA system (which reads on XP-002198525 page 6-43 lines 2).

Regarding claim 25, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses a method for searching for a gated pilot reference in a wireless communication system, comprising: partitioning an overall code space in which the pilot reference may be found into a plurality of groups of non-overlapping code sets, wherein each code set is representative of a specific PN sequence with at a particular offset (which reads on XP-002198525 page 6-44 lines 22-26); ordering the plurality of groups based on likelihood of detecting the pilot reference in each of the groups (which reads on XP-002198525 page 6-44 lines 22-26), with a first group being most likely to be used to generate the pilot reference and a last group being least likely to be used to generate the pilot reference; searching for the pilot reference based on the plurality of groups, one group at a time (which reads on XP-002198525 page 6-44 lines 19-21), however XP-002198525, fails to specifically disclose starting with the first group and ending with the last group.

The examiner contends, however, that such a feature is well known in the art, and the examiner takes offical notice as such.

At the time the invention, it would have been obvious to a person of ordinary skill in the art the modify with well know prior art as described above for the purpose of allowing the search priority.

Regarding claim 26, XP-002198525 discloses everything claimed, as applied above (see claim 8) XP-002198525 discloses a receiver unit in a wireless communication system, comprising: a searcher element configurable to receive and correlate a first set of samples in accordance with a plurality of groups of PN sequences to provide correlated values used to detect a gated pilot reference, wherein the plurality of groups comprise an overall code space in which the pilot reference may be found and are ordered based on likelihood of detecting the pilot reference in each of the groups (which reads on XP-002198525 page 6-44 lines 22-26), however XP-002198525, fails to specifically disclose the plurality of groups are used to searched for the pilot reference based on their order and searching terminates upon acquisition of the pilot reference.

The examiner contends, however, that such a feature is well known in the art, and the examiner takes offical notice as such.

At the time the invention, it would have been obvious to a person of ordinary skill in the art the modify with well know prior art as described above for the purpose of allowing the search priority.

Regarding claim 28, XP-002198525 discloses everything claimed, as applied above (see claim 27) XP-002198525 discloses a controller configured to direct operation of the searcher element and the demodulation element (which reads on XP-002198525 page 6-44 lines 22-26).

Regarding claim 29, XP-002198525 discloses everything claimed, as applied above (see claim 28) XP-002198525 discloses a controller is further configured to provide to the searcher element a set of values for parameters used to correlate the first set of samples with the groups of PN sequences (which reads on XP-002198525 page 6-44 lines 22-26).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheila B. Smith whose telephone number is (703)305-0104. The examiner can normally be reached on Monday-Thursday 6:00 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-0104.

S. Smith
December 13, 2003

SINH TRAN
PRIMARY EXAMINER